

What is claimed is:

1. An image forming apparatus having a toner recycle mechanism characterized in that

rotational torque of a stirring member disposed within a developing device and capacity of a recycle toner within the developing device are detected;

where the rotational torque of said stirring member is elevated and the capacity of said recycle toner is increased, control operation for not changing a development bias voltage and lowering rotational speed of said stirring member is executed; and

where the rotational torque of said stirring member is elevated and the capacity of said recycle toner is not increased, control operation for not changing rotational speed of said stirring member is executed.

2. The image forming apparatus according to claim 1, wherein the capacity of said recycle toner is detected by disposing a level sensor in the vicinity of a supply port of the recycle toner and on the basis of a change in height of a developer within a developing device.

3. The image forming apparatus according to claim 2, wherein said recycle toner is supplied to said developing device directly through a toner carrying tube from a cleaning device.

4. A controlling method of an image forming apparatus having a toner recycle mechanism characterized by

detecting rotational torque of a stirring member disposed within a developing device and capacity of a recycle toner within the developing device;

where the rotational torque of said stirring member is elevated and the capacity of said recycle toner is increased, executing control operation for not changing a development bias voltage and lowering rotational speed of said

stirring member; and

where the rotational torque of said stirring member is elevated and the capacity of said recycle toner is not increased, executing control operation for not changing rotational speed of said stirring member.

5. The controlling method according to claim 4, wherein the capacity of said recycle toner is detected by disposing a level sensor in the vicinity of a supply port of the recycle toner and on the basis of a change in height of a developer within a developing device.

6. The controlling method according to claim 5, wherein said recycle toner is supplied to said developing device directly through a toner carrying tube from a cleaning device.